

Substitute Specification

Approved for Entry

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SUBSTITUTE SPECIFICATION

SURFACE ACOUSTIC WAVE FILTER

BACKGROUND OF THE INVENTION

Technical Field

This invention relates to a surface acoustic wave filter
5 which is used for a communication device, etc., such as a portable telephone.

Background Art

In recent years, along with development of mobile
10 communications, realization of high performance and miniaturization of devices to be used have been desired. As a filter for a mobile communication device among those devices, conventionally, a surface acoustic wave filter (hereinafter, called a SAW filter) has been used widely. At the present day,
15 as a SAW filter for an RF (Radio Frequency) stage, a longitudinal mode type and a ladder mode type are mainly used. In particular, as to the ladder type SAW filter, it is possible to realize a low loss as compared with the longitudinal mode SAW filter. The ladder type SAW filter is of such a configuration that a
20 plurality of surface acoustic wave resonators (hereinafter, called SAW resonators) are connected in a ladder mode, and configured by SAW resonators operating as a serial arm and SAW resonators operating as a parallel arm.

As prior art relating to the ladder-type SAW filter,
25 JP-A-9-270663 publication discloses a method of arranging SAW